

## References

Bergeron R, Meyer TM, Coyle JT, Greene RW. Modulation of N-methyl-D-aspartate receptor function by glycine transport. *Proc Natl Acad Sci U S A*. 1998;95:15730-4.

Danysz W, Parsons CG. Glycine and N-methyl-D-aspartate receptors: Physiological significance and possible therapeutic applications. *Pharmacol. Rev.* 1998;50:597-664.

Debler EA, Lajtha A (1987): High-affinity transport of gamma-aminobutyric acid, glycine, taurine, L-aspartic acid, and L-glutamic acid in synaptosomal (P2) tissue: a kinetic and substrate specificity analysis. *J Neurochem* 48:1851-6.

D'Souza DC, Charney D, Krystal J (1995): Glycine site agonists of the NMDA receptor: a review. *CNS Drug Revs* 1:227-260.

Hashimoto A, Oka T, Nishikawa T (1995): Extracellular concentration of endogenous free D-serine in the rat brain as revealed by in vivo microdialysis. *Neuroscience* 66:635-643.

Hashimoto A, Oka T (1997): Free D-aspartate and D-serine in the mammalian brain and periphery. *Prog. Neurobiol* 52:325-353.

Heresco-Levy U, Javitt DC, Irmilov M, Mordel C, Horowitz A, Kelly D (1996): Double-blind, placebo-controlled, crossover trial of glycine adjuvant therapy for treatment-resistant schizophrenia. *Br J Psychiatry* 169:610-617.

Javitt DC, Sershen H, Hashim A, Lajtha A (1997): Reversal of phencyclidine-induced hyperactivity by glycine and the glycine uptake antagonist glycyldodecylamide.

*Neuropsychopharmacol* 17:202-204.

Javitt DC, Frusciante MJ. (1997): Glycyldodecylamide, a phencyclidine behavioral antagonist, blocks cortical glycine uptake: Implications for schizophrenia and substance abuse. *Psychopharmacol.* 129: 96-98.

Javitt DC, Zylberman I, Zukin SR, Heresco-Levy U, Lindenmayer JP (1994):  
30 Amelioration of negative symptoms in schizophrenia by glycine. *Am J Psychiatry* 151:1234-1236.

Javitt DC, Zukin SR (1991): Recent advances in the phencyclidine model of schizophrenia. *Am J Psychiatry* 148:1301-8.

Javitt DC, Zukin SR (1989): Interaction of [<sup>3</sup>H]MK-801 with multiple states of the *N*-methyl-D-aspartate receptor complex of rat brain. *Proc. Nat. Acad. Sci. USA* 86:740-744.

Javitt DC (1987): Negative schizophrenic symptomatology and the phencyclidine (PCP) model of schizophrenia. *Hill J Psychiat* 9:12-35.

Kleckner NW, Dingledine R (1988): Requirement for glycine in the activation of NMDA-receptors expressed in *Xenopus* oocytes. *Science* 241:835-837.

40 Leiderman E, Zylberman I, Javitt DC, Zukin SR, Cooper TB. Effect of high-dose oral glycine on serum levels and negative symptoms in schizophrenia. *Biol. Psychiatry*, in press.

Liu QR, Lopez-Corcuera B, Mandiyan S, Nelson H, Nelson N (1993): Cloning and expression of spinal cord- and brain-specific glycine transporter with novel structural features. *J Biol Chem* 268:22802-8.

45 Matsui T, Sekiguchi M, Hashimoto A, Tomita V, Nishikawa T, Wada K (1995) Functional comparison of D-serine and glycine in rodents: the effect on cloned NMDA receptors and the extracellular concentration. *J Neurochem.* 65:454-458.

McBain CJ, Kleckner NW, Wyrick S, Dingledine R (1989): Structural requirements for the glycine coagonist site of N-methyl-D-aspartate receptors expressed in *Xenopus* oocytes. *Mol Pharmacol* 36:556-565.

Murray F, Kennedy J, Hutson PH, et al (2000): Modulation of [<sup>3</sup>H]MK-801 binding to NMDA receptors in vivo and in vitro. *Eur J Pharmacol* 397:263-70.

Reynold IJ, Murphy SN, Miller RJ (1987): <sup>3</sup>H-labeled MK-801 binding to the excitatory amino acid receptor complex from rat brain is enhanced by glycine. *Proc. Natl. Acad. Sci. USA* 84:7744-7748.

Schell MJ, Molliver ME, Snyder SH (1995). D-serine, an endogenous synaptic modulator: localization to astrocytes and glutamate-stimulated release. *Proc. Natl. Acad. Sci. USA* 92:3948-3952.

Sershen H, Latha A (1995): Inhibition pattern by analogs indicates the presence of ten or more transport systems for amino acids in brain cells. *J Neurochem* 32:719-726.

Smith KE, Borden LA, Hartig PR, Branchek T, Weinshank RL (1992): Cloning and expression of a glycine transporter reveal colocalization with NMDA receptors. *Neuron* 8:927-35.

Supplisson S, Bergman C (1997): Control of NMDA receptor activation by a glycine transporter co-expressed in *Xenopus* oocytes. *J Neurosci* 17:4580-90.

Tanii Y, Nishikawa T, Hashimoto A, Takahashi K (1991): Stereoselective inhibition by D- and L-alanine of phencyclidine-induced locomotor stimulation in the rat. *Brain Res* 563:281-284.

Tanii Y, Hishikawa T, Hashimoto A, Takahashi K (1994): Stereoselective antagonism by enantiomers of alanine an dserien of phencyclidine-induced hyperactivity, stereotypy and ataxia. *J. Pharmacol. Exp. Ther.* 269:1040-1048.

70 Tsai G, Yang P, Chung L-C, Lange N, Coyle JT (1998): D-serine in the treatment of schizophrenia. *Biol. Psychiatry* 44:1081-1089.

Wood PL (1995): The co-agonist concept: is the NMDA-associated glycine receptor saturated in vivo? *Life Sci* 57:301-10.

Wong EH, Knight AR, Ransom R (1987) Glycine modulates [3H]MK-801 binding to the  
75 NMDA receptor in rat brain. *Eur J Pharmacol* 142:487-8.

Zafra F, Aragon C, Olivares L, Danbolt NC, Gimenez C, Storm-Mathisen J (1995):  
Glycine transporters are differentially expressed among CNS cells. *J Neurosci* 15:3952-69